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Letter to the Editor

The importance of skin biopsy in the diverse clinical manifestations of disseminated candidiasis

The incidence of disseminated candidiasis has increased dramatically over the past several decades, and the disease often leads to serious and fatal complications. Although widespread organ involvement is characteristic of disseminated candidiasis, reports of skin lesions are rare.[1,2] We report a patient with disseminated candidiasis who had diverse cutaneous manifestations seen on the scalp, trunk, and extremities.

A 70-year-old man in a poor conscious state presented with fever and a generalized skin rash of 6-day duration. He had been admitted 2 weeks previously for scheduled chemotherapy treatment of his hypopharyngeal squamous cell carcinoma (SCC), diagnosed 2 years prior. Dermatological examination showed multiple erythematous papulonodules on the scalp and some blanchable erythematous macules and several erythematous patches topped with vesicles/bullae on the trunk and extremities (Figure 1, A and B). There was no associated mucosal defect. His drug history was significant for chemotherapeutic agents (pacli-

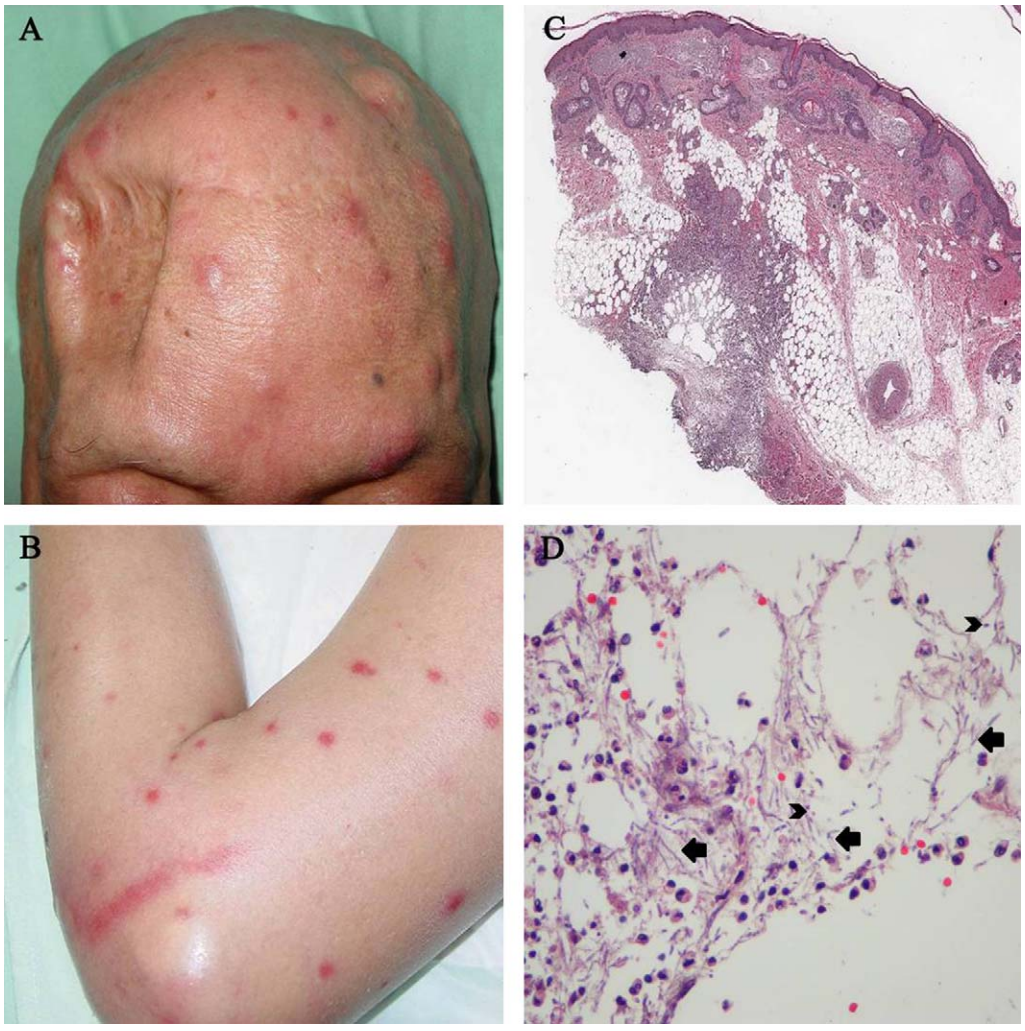

Figure 1. (A) Multiple erythematous papulonodules on the scalp, and (B) some blanchable erythematous macules and several erythematous patches topped with vesicles/bullae on the trunk and extremities. Skin biopsies of both (C) scalp and (D) left lower leg, revealed mixed inflammatory cell infiltration with several aggregates of hyphae (arrows) and spores (arrowheads) in the dermis and subcutis (hematoxylin–eosin stain; original magnification: (C) 10× and (D) 400×).

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taxel and cisplatin), meropenem, and granulocyte colony-stimulating factor (filgrastim). The initial differential diagnoses for the rash on the trunk and extremities included erythema multiforme, disseminated herpes virus infection, and candidiasis. Skin metastasis of the hypopharyngeal SCC presenting as papulonodules on the scalp was suspected. Sweet's syndrome was also considered based on the patient's drug history and underlying malignancy.

Skin biopsies of both the scalp and lower leg were performed. Due to persistent fever, blood culture was done and later proved the candidemia (*Candida tropicalis*) on the day of the skin biopsy. Histologically, both specimens revealed dense mixed inflammatory cell infiltration with several aggregates of hyphae and spores in the dermis and subcutis (Figure 1, C and D). Periodic acid-Schiff stain for fungi was positive. Tissue culture further confirmed the presence of *C. tropicalis*. A diagnosis of disseminated candidiasis with cutaneous manifestations was made. Despite the application of fluconazole, which was later shifted to amphotericin B, the patient died 1 week later due to multi-organ failure.

Disseminated candidiasis remains an important nosocomial infection that continues to present major diagnostic and therapeutic challenges to the clinician. The disease can have numerous and complex presentations and can involve virtually any organ. Regarding cutaneous invasion, *C. tropicalis* is the most common etiologic species.[3] It can be present as macules, papules, petechiae, hemorrhagic foci, and nodules. Previous reports[4,5] have emphasized the triad of 'fever, rash, and myalgias' as presumptive evidence of disseminated candidiasis. Unfortunately, muscle tenderness could not be assessed due to the poor conscious state of our patient.

Thus, with the myriad clinical presentations and aggressive behavior of disseminated candidiasis, we emphasize the importance of prompt skin biopsy for unexplained fever and skin rash, especially when observed in immunocompromised patients, in order to make an early diagnosis and to treat these potentially life-threatening infections.

Conflict of interest

No conflict of interest to declare.

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